

ON *BENNELONGIA TUNTA* DE DECKKER sp. nov.

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Bennelongia tunta sp. nov.

1981 *Bennelongia* sp. De Deckker, *Trans. R. Soc. S. Aust.*, **105**, 95, fig. 8r.

Holotype: Australian Museum, Sydney, dissected ♂, **P32574**.

Type locality: Billabong (20° 12' 23" S, 145° 58' 41" E) at the northern end of Lake Powlathanga, very close to Powlathanga Homestead, 35 km W of Charters Towers, Queensland, Australia. Material collected by P. De Deckker (4.VI.1981).

Derivation of name: From an Aboriginal language of Queensland meaning spear in reference to the numerous denticles along a great part of the periphery of the left valve.

Figured specimens: Australian Museum, Sydney nos. **P32574** (holotype ♂ car.; LV: Pl. 9, 124, figs. 1-2; RV: Pl. 9, 124, fig. 3; Text-fig. 1 B-E; Text-fig. 2A, C-H), **P32575** (♂ LV: Pl. 9, 118, fig. 3), **P32576** (♀ car.; LV: Pl. 9, 120, fig. 1; RV: Pl. 9, 120, fig. 2; Text-fig. 2E), **P32577** (♀ RV: Pl. 9, 118, fig. 2, Text-fig. 1A, F), **P32578** (♂ car.: Pl. 9, 120, fig. 3), **P32579** (♀ car.: Pl. 9, 122, fig. 2), **P32580** (♀ car.: Pl. 9, 118, fig. 1; Pl. 9, 122, fig. 4), **P32581** (juv. car.: Pl. 9, 122, fig. 1); **P32582** (juv. car.: Pl. 9, 122, fig. 6), **P32583** juv. (RV: Pl. 9, 122, fig. 3; LV: Pl. 9, 122, fig. 5). All from type locality.

Diagnosis: Oblong shell with LV the larger and forming a dorsal "keel" which embraces the shorter and more ellipsoidal RV; periphery of LV denticulated antero- and posterodorsally and of RV ventrally.

Explanation of Plate 9, 118

Fig. 1, ♀ car., ext. rt. lat. (**P32580**, 2200 µm long); Fig. 2, ♀ RV, ext. lat. (**P32577**, 1965 µm long); fig. 3, ♂ LV, ext. lat. (**P32575**, 2160 µm long). All paratypes.
Scale A (1000 µm; × 28), figs. 1-3.

Diagnosis (contd): Valves asymmetrical especially anteroventrally where the larger LV is beak-shaped with broad concave depression posterior to the beak; RV almost smoothly curved except for narrow and pointed beak-shaped structure at edge. Lateral lobe and distal end of inner lobe of hemipenis both pointed and curved inward.

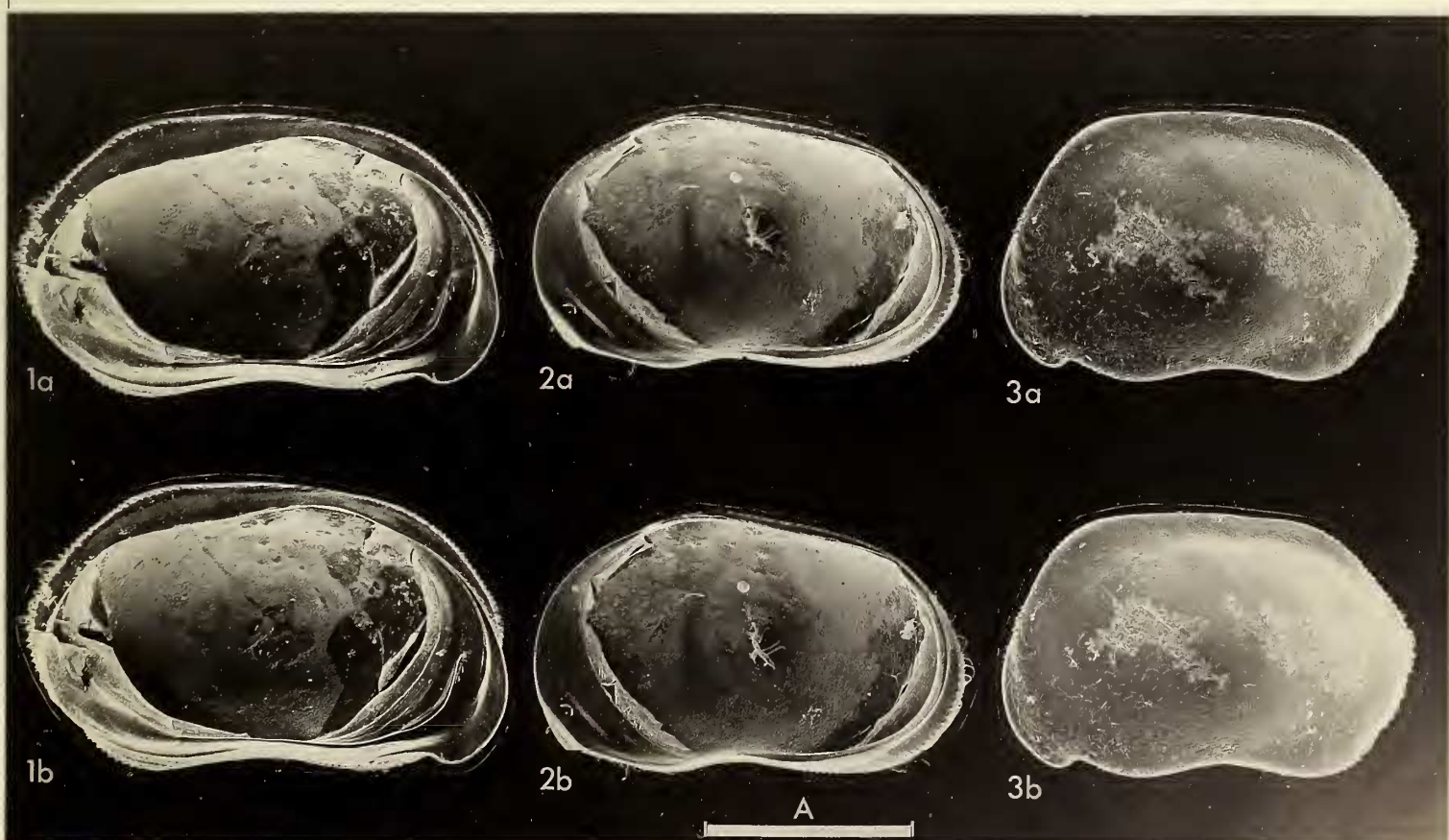
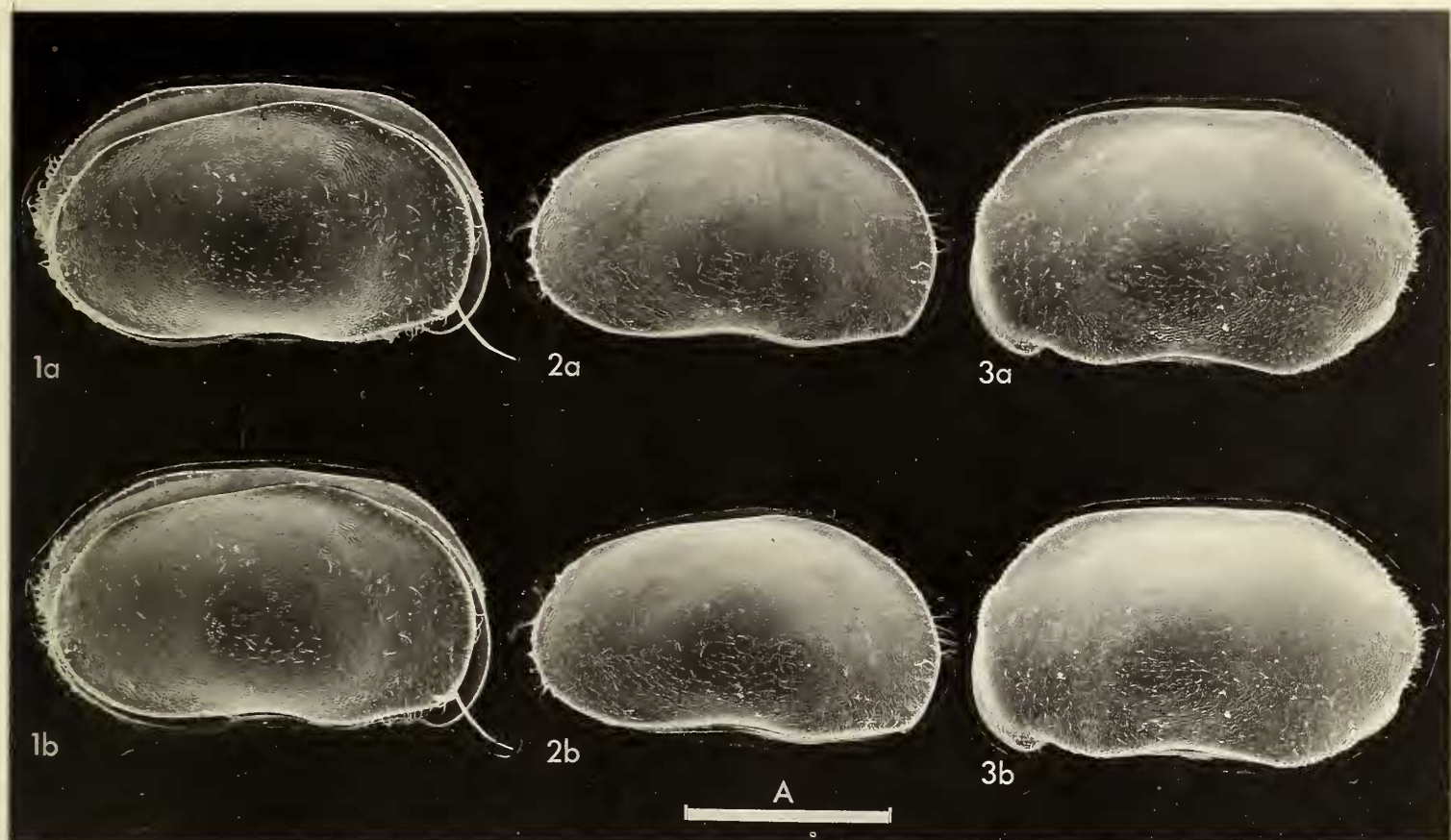
Remarks: *B. tunta* can swim actively and has a green shell. The small, smooth and narrow claw fixed on the inner side of the last segment of the male antenna (Text-fig. 1D) is longer, broader and denticulated in females. Other species of *Bennelongia*, which like *B. tunta* are characterized by a conspicuous inner list forming a lip-like flap anteroventrally only in the LV, have been recently described or reviewed in De Deckker (*Trans. R. Soc. S. Aust.*, **105**, 91-138, 1981) and De Deckker and McKenzie (*ibid* **105**, 53-58, 1981). *B. tunta* is easily distinguished from other species of the genus by the following features: rectangular outline of the shell, much narrower shape in dorsal view, prominent dorsal "keel" seen on taller LV; lateral lobe of hemipenis in shape of a bird of prey's beak. The ventral area of both valves is characterized by a number of small pustules which are closely arranged in rows; these are best seen near the mouth region. Arrangement of adductor muscle scars (see Pl. 9, 120, fig. 1) like that of *B. harpago* as illustrated on Fig. 7 in De Deckker and McKenzie (*op. cit.*) except that the central scar in the posterior row is missing in *B. tunta*.

Undissected paratype material of *B. tunta* is deposited at the Australian Museum under no. **P32584**.

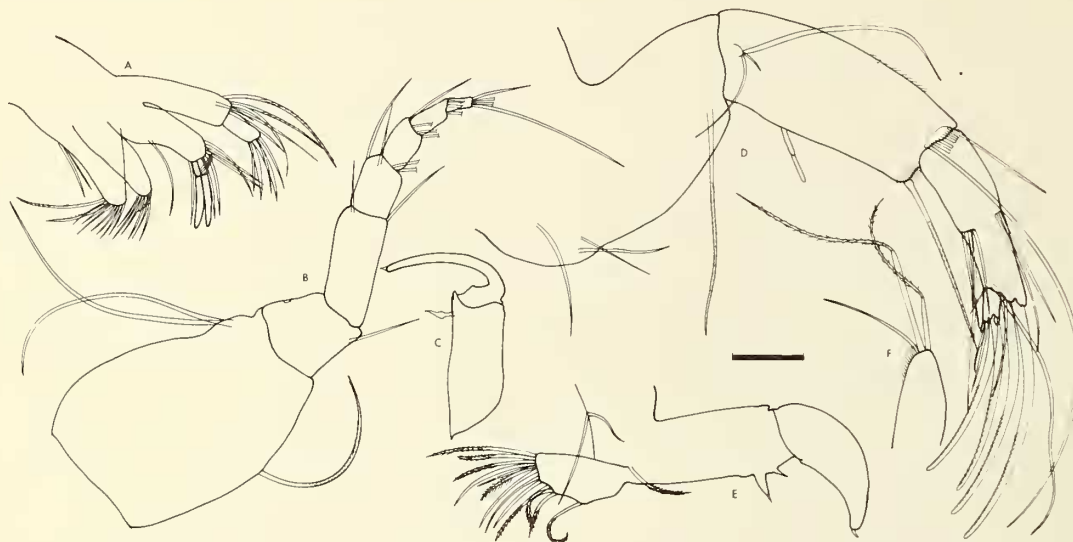
Distribution: *B. tunta* was originally recorded from Cauckingburra Swamp (collected by Dr B. V. Timms, 16.VII.1974, see De Deckker, 1981 *op. cit.*) near Lake Buchanan, SW. of Charters Towers in Queensland. It was re-collected on 3.VI.1981 by P.D.D. It also has been found some 400 km S. of Charters Towers in 3 adjacent roadside swamps on the northern side of the road between Alice and Barcaldine (20 km E. of Barcaldine and 2 km E. of Geera Railway Station) on 30.V.1981 by P.D.D. The type locality is on the W. of Charters Towers.

Explanation of Plate 9, 120

Fig. 1, ♀ LV, int. lat. (**P32576**, 2340 µm long); fig. 2, ♀ RV, int. lat. (**P32576**, 2060 µm long); fig. 3, ♂ car., ext. lt. lat. (**P32578**, 2025 µm long). All paratypes.
Scale A (1000 µm; × 28), figs. 1-3.



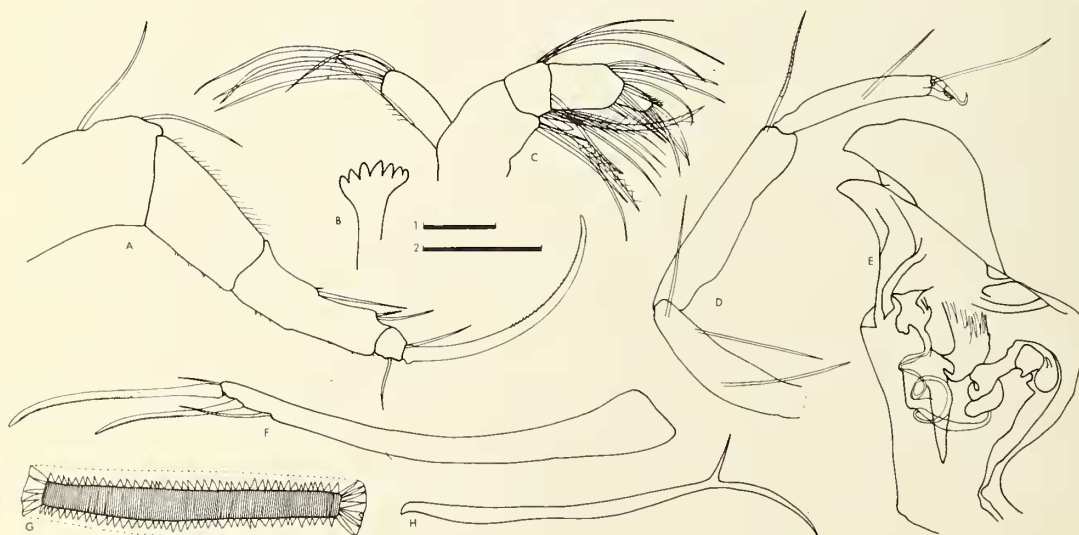
Text-fig. 1, ♀(paratype, **P32577**) A: maxillular processes and palp; F: maxillar palp. ♂(holotype, **P32574**) B: antennula, C: left maxillar palp; D: antenna; E: right maxilla.



Explanation of Plate 9, 122

Fig. 1, juv. car., ext. lt. lat. (**P32581**, 1050µm long); fig. 2, ♀car., ext. vent. (**P32579**, 2170µm long); fig. 3, juv. RV, int. lat. (**P32583**, 1680µm long); fig. 4, juv. car., ext. dors. (**P32580**, 2200µm long); fig. 5, juv. LV, int. lat. (**P32583**, 1680µm long); fig. 6, juv. car., ext. rt. lat. (**P32582**, 1335µm long). All paratypes.
Scale A (1000µm; × 28), figs. 1-6.

Text-fig. 2, ♂(holotype, **P32574**) A: thoracopoda I; C: mandibular palp; D: thoracopoda II; E: hemipenis; F: furca; G: Zenker organ; H: furcal attachment. ♀(paratype, **P32576**) B: rake-like organ.
Scale 1: 100µm for A, C-H; 2: 100µm for B.



Explanation of Plate 9, 124

Figs. 1-3, car. (holotype, **P32574**), figs. 1, 2, LV, ant. int. lat. at different angles; fig. 3, RV, ant. int. lat.
Scale A (500µm; × 55), figs. 1-3.

